

Pulliam Power Plant

Draft PMP Action Plan Outline

There are four main sources of water to the wastewater treatment facility. These include water from the boilers, coal storage and handling activities, demineralizer system water and service water. The primary source of water used at the facility is water withdrawn from the Fox River/Green Bay, which is known to contain mercury. Water used in the boiler and demineralizer system is obtained from the City of Green Bay Water Utility. The current approach is to evaluate each of these main sources to determine if they contribute a significant amount of mercury to the wastewater treatment facility. If a plant process is identified to be adding mercury to the facility's wastewater treatment system at levels above the background levels of the original source water supply, then the facility will evaluate the impact of possible actions based on expected water quality improvements at Outfall 101. This evaluation will take into consideration the following:

- a) the likelihood of achieving expected results,
- b) ease of implementation,
- c) whether the control measures in the process will have a discernible impact (either on concentration or load) due to the treatment steps taken downstream (i.e. Outfall 101),
- d) whether implementing a particular control is expected to itself be unattainable for one of the reasons in 40CFR 131.10(g)
- e) and whether the source of the mercury is from the power plant or from the water supply.

Boilers	Wastewater Treatment Facility Sources	Action
Pulliam 5-8 See note 1	Boiler sluice water Boiler seal water Boiler blow down	Units 5&6 will stop combustng coal by June 2015 per a previous EPA/WDNR commitment. As a result the boiler sluice water sources will be eliminated from these units during the permit term.

Note 1: Sampling as part of the PMP will be from either Unit 7 or Unit 8 boiler. The results are assumed to be representative of all the facility boilers since they burn the same coal and all the source water supplies are the same.

Coal Handling	Wastewater Treatment Facility Sources	Action
	Coal pile runoff	Investigate using coal pile runoff water for coal pile dust control.
	Plant storm drain(s) that may contain coal pile runoff	Investigate the re-routing of drains to coal pile runoff storage basin.

Demineralizer	Wastewater Treatment Facility Sources	Action
	Sulfuric Acid rinse water	Reduce mercury in the sulfuric acid supply from 1 ppm to 0.1 ppm.
	Caustic rinse water	Reduce the mercury in the caustic supply from 0.5 ppm to 0.002 ppm.
	City of Green Bay water supply	Post demin rinse water sample will be compared to pre demin sample mercury concentration

Service water from Fox River	Wastewater Treatment Facility Sources	Action
	Non contact cooling water supplied to plant equipment.	

The sampling frequency for these water sources will be quarterly. This is the same frequency as the mercury sampling requirements associated with Outfall 101. If a wastewater stream is determined to be contributing mercury to the wastewater treatment facility above the background levels of the service water supply (Fox River), quarterly sampling will continue during the permit term unless or until:

- An individual source(s) no longer contributes water to the wastewater treatment facility;
- It is determined that after a minimum of two years worth of data collection a wastewater stream has contributed a consistent concentration of mercury to the wastewater treatment facility. For these waste streams a sample will be collected at least annually.
- It is determined that after one year an individual source is contributing mercury at a concentration that is less than the wildlife water quality criteria (1.3 ng/l) to the wastewater treatment facility.

Finally, in order to determine the effectiveness of the facility's wastewater treatment system at removing mercury, samples of wastewater will be collected quarterly from the influent to the wastewater treatment facility (prior to the lamella clarifiers) during the next five years or until the permit is renewed.